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| 10/574,607 | 04/05/2006 | Noriyuki Fukui | 288058US2PCT | 4208 |
| 22850 | 7590 | 04/16/2010 | EXAMINER | |
| OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, L.L.P. 1940 DUKE STREET ALEXANDRIA, VA 22314 | | | CASCA, FRED A | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2617 | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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|------------------------------|--------------------------------------|-------------------------------------|--|
| Office Action Summary | Application No. 10/574,607 | Applicant(s) FUKUI ET AL. | |
| | Examiner FRED A. CASCA | Art Unit 2617 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 January 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 10-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 10-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAIL ACTION

1. This action is in response to applicant's amendment filed on January 15, 2010. Claims 10-31 are still pending in the present application. **This Action is made FINAL.**
2. Amendments to the Abstract and the Specification has been acknowledged and accepted.

Claim Objection

3. Claim 26 is objected to because it is a duplicate of claim 20 and it depends on the same independent claim that claim 20 depends upon.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 20-31 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

New claims 20-31 have been added and they contain new matter. The phrases "resource represents a transmission permitted time during which data can be transmitted," "resource represents a maximum number of bits which is permitted for the terminal," and "resource represents a transmission rate at which data is transmitted" have not be described in the

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specification. Applicant has not explained where in the specification the contents of the new claims are located

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 10-14 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Parantainen et al (US 2002/0181422 A1) in view of Haartsen (US 2002/0178250 A1), and still further in view of Love et al (US 2004/0219917 A1).

Referring to claim 10, Parantainen discloses a communication method for a communication system (abstract) including a base station and a terminal (figure 1), the terminal transmitting a data as a new data to the base station (figure 1-6b and paragraphs 24-25), and upon receiving an NAK signal indicating a reception failure from the base station as a response to the transmission of the new data, transmitting the new data as retransmission data to the base station, (abstract figures 4-6b) the communication method comprising

a first step for the base station to transmit information on a value of a resource for data transmission that is used for a communication between the base station and the terminal (figures 4-6b and paragraphs 2-3 and 49, note that in cellular communications, e.g., GSM, a down link

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frequency and an uplink frequency gets assigned to allow communication between the terminal and the base station. This frequency is the value of the claimed resource);

a second step for the terminal to receive, from the base station, information on the value of the resource for data transmission (Figures. 1-6B and Par. 2-3 and 49, note that receiving information on which reverse link frequency to use is inherent in cellular communication);

a third step for the terminal to transmit a new data to the base station based on the value of the resource for data transmission (Par. 71, “uplink packet data”); and

a fourth step for the terminal, to transmit a retransmission data to the base station regardless of the value of the resource for data transmission, in case the NAK signal is received from the base station as a response to the new data (Par. 68, note retransmission happens regardless of what data packet was used in the initial data transmission).

Parantainen does not specifically disclose that in the fourth step the retransmission takes place when both the new data is transmitted and the NAK is received in the format claimed.

Haartsen discloses retransmissions when NAK is received the data is received in error (Par. 50).

It would have been obvious to a person of ordinary skill in the art at the time of invention to modify the method of Parantainen in the format claimed for the purpose of providing an efficient communication system.

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The above combination is silent on autonomously transmitting a retransmission without sending a transmission request to the base station for a resource to transmit the retransmission, in the format claimed.

Love discloses autonomously transmitting a retransmission without sending a transmission request to the base station for a resource to transmit the retransmission (Par. 64, “otherwise it will retransmit the packet at an appropriate time when in autonomous mode,” note that when the autonomous mode of the MS does not require a scheduling assignment, thus, it is equivalent to “autonomously transmitting a retransmission without sending a transmission request to the base station for a resource to transmit the retransmission” as claimed).

It would have been obvious to a person of ordinary skill in the art at the time of invention to modify the above combination in the format claimed for the purpose of saving time and thus, providing an efficient communication system.

Referring to claims 11-13, claims 11-13 recite features analogous to the features of the method defined by claim 10 (as rejected above). Thus, the combination of Parantainen/Haartsen/Love discloses all elements of claims 11-13 (please see the rejection of claim 10 above).

Referring to claim 14, The combination of Parantainen/Haartsen/Love discloses the communication method according to claim 10, and further disclose in the fourth step the retransmission data is transmitted after a predetermined time defined between the terminal and the base station has elapsed since reception of the NAK signal in the format claimed (Haartsen, Par. 50 and Parantainen, ARQ).

It would have been obvious to a person of ordinary skill in the art at the time of invention to modify the method of Parantainen in the format claimed for the purpose of providing an efficient communication system.

Claim 17 recites features analogous to the features of claim 14. Thus, it is rejected for the same reasons as set forth in the rejection of claim 14.

Referring to claim 20, the combination of Parantainen/Haartsen/Love discloses the communication method according to claim 10, and further discloses the resource represents a transmission permitted time during which data can be transmitted from the terminal to the base station (Love, paragraph 64, “scheduling assignment”, note that the scheduler implies that there is scheduling of time when in explicit mode).

Claims 23, 26 and 29 recite features analogous to the features of claim 20. Thus, they are rejected for the same reasons as set forth above.

7. Claims 15, 16, 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable Parantainen et al (US 2002/0181422 A1) in view of Haartsen (US 2002/0178250 A1), further in view of Love et al (US 2004/0219917 A1) and further in view of well known prior art (MPEP 2144.03).

Referring to claim 15, the combo of Parantainen/Haartsen/Love discloses the communication method according to claim 10.

The combination does not specifically disclose wherein in the fourth step the retransmission data is transmitted at a coding rate lower than an initial coding rate used in the third step.

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The examiner takes official notice of the fact that retransmission of data at a lower data rate is well known in the art.

It would have been obvious to a person of ordinary skill in the art at the time of invention to modify the combination in the format claimed, for the purpose of providing an efficient communication system.

Referring to claim 16, the combo of Parantainen/Haartsen discloses the communication system according to claim 11.

Parantainen does not specifically disclose wherein the base station further includes a scheduling unit configured to estimate a transmission time zone for retransmission data transmitted by the terminal, and the first unit transmits information on the value of the resource for data transmission to another terminal that requests resource assignment from the base station, the information on the value of the resource for data transmission incorporating the estimated transmission time zone estimated by the scheduling unit, in the format claimed.

The examiner takes official notice of the fact that scheduling different time zones for retransmission is well known in the art.

It would have been obvious to a person of ordinary skill in the art at the time of invention to modify the combination in the format claimed, for the purpose of providing an efficient communication system.

Claim 18 recites features analogous to the features of claim 15. Thus, it is rejected for the same reasons as set forth in the rejection of claim 15.

Claim 19 recites features analogous to the features of claim 16. Thus, it is rejected for the same reasons as set forth in the rejection of claim 16.

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8. Claims 21, 24, 27 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable Parantainen et al (US 2002/0181422 A1) in view of Haartsen (US 2002/0178250 A1), further in view of Love et al (US 2004/0219917 A1) and further in view of Diehl et al (US 5,870,380).

Referring to claim 21, the combination of Parantainen/Haartsen/Love discloses the communication method according to claim 10.

Parantainen is silent on the resource representing a maximum number of bits which is permitted for the terminal to transmit to the base station.

Diehl discloses resource being assigned that represents a maximum number of bits which is permitted for a terminal to transmit (Col. 2, lines 35-50).

It would have been obvious to a person of ordinary skill in the art at the time of invention to modify the combination in the format claimed, for the purpose of providing an efficient communication system.

Claims 24, 27 and 30 recite features analogous to the features of claim 21. Thus, they are rejected for the same reasons as set forth above.

9. Claims 22, 25, 28 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable Parantainen et al (US 2002/0181422 A1) in view of Haartsen (US 2002/0178250 A1), further in view of Love et al (US 2004/0219917 A1) and further in view of Chen (US 2003/0007466 A1).

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Referring to claim 22, Parantainen/Haartsen/Love discloses the communication method according to claim 10.

Parantainen is silent on the resource representing a transmission rate at which data is transmitted from the terminal to the base station.

Chen discloses resource representing a transmission rate at which data is transmitted from a terminal to the base station (Par. 42).

It would have been obvious to a person of ordinary skill in the art at the time of invention to modify the combination in the format claimed, for the purpose of providing an efficient communication system.

Claims 25, 28 and 31 recite features analogous to the features of claim 22. Thus, they are rejected for the same reasons as set forth above.

Response to Arguments

10. Applicant's arguments with respect to claims 10-14, 17 and 20-31 have been considered but are they are moot in view of new grounds of rejection.

Applicant's arguments with respect to claims 15-16 and 18-19 have been fully considered but they are not persuasive. With reference to claims 15 and 18, the well known concept of retransmitting at a lower coding rate is taught by Park et al (US 2002/0002064) in paragraph 5, and also by Lee et al (US 2002/0028688) in paragraph 7. With reference to claims 16 and 19, the well know concept of scheduling to estimate a transmission time zone for retransmission data transmitted by the terminal is disclosed by Love et al (2004/0219917) and by Brailean et al (US 5,970056), and the concept of estimating transmission time zone is also taught by Brailean.

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Conclusion

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fred A. Casca whose telephone number is (571) 272-7918. The examiner can normally be reached on Monday through Friday from 9 to 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Harper, can be reached at (571) 272-7605. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Fred A. Casca/

Examiner Art Unit 2617

/VINCENT P. HARPER/

Supervisory Patent Examiner, Art Unit 2617